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Ontario

Ministry of the  
Environment

April 4, 1974

LEAD SURVEYS IN ONTARIO 1972 AND 1973

Phytotoxicology Section  
Air Resources Branch

During the two-year period 1972 and 1973 the Phytotoxicology Section of the Air Management Branch investigated a total of 45 individual companies in the Province of Ontario for the presence of lead contamination in their immediate vicinity. Lead contents in soil, native vegetation, home-grown fruits and vegetables, street dust, and undisturbed dust were determined in a total of 85 surveys. In the Toronto area alone (including Mississauga) 26 individual companies were investigated in a total of 58 surveys. For all the surveys in Ontario, a total of 2627 samples were collected with 3750 lead analyses performed utilizing atomic absorption spectroscopy. Comprehensive reports have been prepared by Phytotoxicology staff for most of the surveys, with the remainder under preparation.

Table 1 presents some average levels of lead found in the Ontario surveys for rural, urban, and highway and major street locations. Levels considered excessive for soil and vegetation are given also in this table.

Excessive levels of lead were found in soil or vegetation in the vicinity of 26 of the 45 companies in Ontario, of which 14 of these companies were in the Toronto area.

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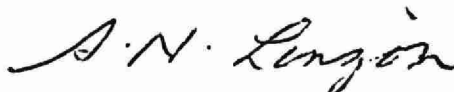
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Table 2 lists the 26 companies with lead contamination in their vicinity in a priority ranking based on soil and vegetation data. The first three companies listed, Canada Metals, 721 Eastern Avenue, Toronto; Toronto Refiners and Smelters, 28 Bathurst St., Toronto; and Tonolli Company of Canada Ltd., 2414 Dixie Road, Mississauga, are lead recovery industries and were found to have the greatest extent of lead contamination within their immediate vicinity. The next two sources listed, Electric Storage Battery Company, 2301 Dixie Rd., Mississauga, and Prestolite Batteries Ltd., 1352 Dufferin Street, Toronto, manufacture storage batteries and can be considered also as major sources of lead.

Table 3 lists 19 companies investigated in either 1972 or 1973 in which no excessive levels of lead were found in soil or vegetation in their immediate vicinity.

Tables 2 and 3 are subject to revision on the basis of future surveys and abatement measures undertaken by the companies.



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Supervisor, Phytotoxicology Section

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TABLE 1. LEAD LEVELS FOUND IN ONTARIO SURVEYS

SOME AVERAGE LEAD LEVELS	S O I L	VEGETATION	
	(ppm, dry wt.)	(ppm, dry wt.)	
	0 - 2"	not washed	washed
Rural Area	<100	15	10
Urban Area	200 - 300	70	35
Adjacent to Highway and Major Street Location	300 - 400	100	50
Considered Excessive	600	150	75

TABLE 2. LEAD SURVEYS IN ONTARIO - 1972-1973

COMPANIES INVESTIGATED AND EXCESSIVE LEVELS OF LEAD FOUND IN SOIL OR VEGETATION IN THEIR  
IMMEDIATE VICINITY

COMPANY AND LOCATION	DEGREE OF CONTAMINATION				EXTENT OF CONTAMINATION IN SOIL OR VEGETATION	R E M A R K S
	S O I L		VEGETATION			
	ppm, dry weight		ppm, dry weight			
	0-2"	2-4"	not washed	washed		
Considered Excessive	600	500	150	75	1500 feet (in several directions)	Highest measured:(ppm dry wt.) Soil (0-2") 21,200 600'S Nov. '73 Vegetation (NW) 3,530 600'S Nov. '73
1. <u>CANADA METALS</u> 721 Eastern Avenue Toronto	5,380 (300'E)	6,200 (300'E)	349 (300'E)	262 (300'E)		
2. <u>TORONTO REFINERS AND SMELTERS</u> 28 Bathurst Street Toronto	4,000 (400'W)	5,000 (400'W)	370 (400'W)	200 (400'W)	1500 feet E and NE	Highest measured:(ppm dry wt.) Soil (0-2") 30,000 100'E July '73 Vegetation (NW) 6,800 20'N July '72
3. <u>TONOLLI COMPANY OF CANADA LTD.</u> 2414 Dixie Road Mississauga	11,250 (100'S)	1,950 (100'S)	3,600 (100'S)	1800 (100'S)	1000 feet E and W (500-1000 ft. in other directions).	Highest measured:(ppm dry wt.) Soil (0-2") 11,250 100'S Aug. '73 Vegetation (NW) 3,850 100'S Aug. '72
4. <u>ELECTRIC STORAGE BATTERY CO. LTD.</u> 2301 Dixie Road Mississauga	3,425 (50'NE)	420 (50'NE)	570 (50'NE)	294 (50'NE)	1000 feet E (500 feet S)	Difficult to differentiate some of the contamination with respect to sources Tonolli or E.S.B.
...continued/						

TABLE 2. LEAD SURVEYS IN ONTARIO - 1972-1973  
COMPANIES INVESTIGATED AND EXCESSIVE LEVELS OF LEAD FOUND IN SOIL OR VEGETATION IN THEIR  
IMMEDIATE VICINITY

COMPANY AND LOCATION	DEGREE OF CONTAMINATION				EXTENT OF CONTAMINATION IN SOIL OR VEGETATION	R E M A R K S
	S O I L		V E G E T A T I O N			
	ppm, dry weight		ppm, dry weight			
	0-2"	2-4"	not washed	washed		
Considered Excessive	600	500	150	75		
5. PRESTOLITE BATTERIES CO. LTD. 1352 Dufferin Street Toronto	1,930 (100'N)	565 (100'N)	433 (100'N)	259 (100'N)	1000 feet W (600-1000 ft. in other directions)	Highest measured: (ppm dry wt. Soil (0-2") 17,300 100'W (in parking lot) Nov. '73 Vegetation 433 100'N (NW) Nov. '73
6. ETHYL CORPORATION Corunna	3,480 (330'SW)	125 (330'SW)	187 (1000'WSW)	135 (1000'WSW)	1000'WSW	
7. DOMINION COLOR CORP. (and ANACONDA) New Toronto Street Etobicoke	755 ( $\angle$ 50'N)	620 ( $\angle$ 50'N)	165 (50'NNW)	138 (50'NNW)	900' SSE and WSW - vegetation	Further evaluation required to separate two sources
8. CORNING GLASS Bracebridge	No data	No data	No data	190 (800 ft. N)	800'N - vegetation	
9. CHRYSLER CORP. Windsor	708 (800'ESE)	345 (800'ESE)	No data	No data	800'ESE	Further evaluation required since high levels near roads and parking lots.
continued/						

TABLE 2. LEAD SURVEYS IN ONTARIO - 1972-1973  
COMPANIES INVESTIGATED AND EXCESSIVE LEVELS OF LEAD FOUND IN SOIL OR VEGETATION IN THEIR  
IMMEDIATE VICINITY

COMPANY AND LOCATION	DEGREE OF CONTAMINATION				EXTENT OF CONTAMINATION IN SOIL OR VEGETATION	R E M A R K S
	S O I L		VEGETATION			
	ppm, dry weight		ppm, dry weight			
	0-2"	2-4"	not washed	washed		
Considered Excessive	600	500	150	75		
10. <u>GOODYEAR HOSE DIVISION</u> Collingwood	No data	No data	165 300'N	163 300'N	600 feet N (300 feet E)	
11. <u>SIGNODE CANADA LTD.</u> 115 Ridgetop Road Scarborough	30 (500'ENE)	25 (500'ENE)	207 500'ENE	110 (500'ENE)	500' ENE-vegetation Soil normal	Further evaluation required since high levels in vegetation near a parking lot
12. <u>TRUE TEMPER</u> Hamilton	1,000 (300'SSW)	575 (300'SSW)	162 (300'SSW)	51 (300'SSW)	300'SSW	
13. <u>FEDERATED GENCO LTD.</u> 1110 Birchmount Rd. Scarborough	573 (100'SE)	135 (100'SE)	307 (300'NE)	171 (300'NE)	300 feet NE	
14. <u>MUELLER LTD.</u> Sarnia	723 (300'W)	520 (300'W)	13 (300'W)	9 (300'W)	300'W - soil vegetation normal	Results indicate no current emissions of lead
...continued/						

TABLE 2. LEAD SURVEYS IN ONTARIO - 1972-1973  
COMPANIES INVESTIGATED AND EXCESSIVE LEVELS OF LEAD FOUND IN SOIL OR VEGETATION IN THEIR  
IMMEDIATE VICINITY

COMPANY AND LOCATION	DEGREE OF CONTAMINATION				EXTENT OF CONTAMINATION IN SOIL OR VEGETATION	R E M A R K S
	S O I L		VEGETATION			
	ppm, dry weight		ppm, dry weight			
	0-2"	2-4"	not washed	washed		
Considered Excessive	600	500	150	75		
15. <u>GOULD MANUFACTURING</u> Fort Erie	413 (150'S)	90 (150'S)	102 (250'NE)	97 (250'NE)	250'NE in vegetation Soil somewhat elevated	
16. <u>ELECTRIC STORAGE BATTERY (E.S.B.) COMPANY (CANADA LTD.</u>  663 Warden Avenue Scarborough	193 (200'SE)	188 (200'SE)	162 (200'SE)	67 (200'SE)	200 feet SE in vegetation Soil normal for urban area	Requires further evaluation
17. <u>NORTH AMERICAN CONTAINERS</u>  Aylmer	1,050 (180'N)	440 (180'N)	No data	No data	180'N	Survey conducted in December, 1973. Further survey in 1974 growing season will include vege- tation.
18. <u>GLOBELITE BATTERIES LTD.</u>  1290 Bellamy Road Scarborough	323 (100'NE)	63 (100'NE)	350 (100'NE)	255 (100'NE)	150 feet NE and 125 feet SE in vege- tation Soil normal for high- way location	Automotive exhaust from Highway 401 immediately north of plant contributing to lead contamination in area
...continued/						



TABLE 2. LEAD SURVEYS IN ONTARIO - 1972-1973  
COMPANIES INVESTIGATED AND EXCESSIVE LEVELS OF LEAD FOUND IN SOIL OR VEGETATION IN THEIR  
IMMEDIATE VICINITY

COMPANY AND LOCATION	DEGREE OF CONTAMINATION				EXTENT OF CONTAMINATION IN SOIL OR VEGETATION	R E M A R K S
	S O I L		VEGETATION			
	ppm, dry weight		ppm, dry weight			
	0-2"	2-4"	not washed	washed		
Considered Excessive	600	500	150	75		
19. <u>RAM REFINED ALLOYS</u> 610 Beach Road Hamilton	603 (5'N)	763 (5'N)	85 (150'E)	90 (150'E)	150'E in vegetation 5'N in soil	
20. <u>GENERAL MOTORS</u> <u>(NORTH PLANT)</u> Oshawa	433 (50'N)	303 (50'N)	440 (10'E)	152 (10'E)	50'N and 100'E in vegetation  soil somewhat elevated	Automobile emissions from several large employee parking lots may have contributed
21. <u>DON MILLS STEEL</u> <u>AND METAL LTD.</u> Gormley	400 5' SW	210 5' SW	160 30'N	88 30'N	30 feet N in vege- tation  Soil somewhat ele- vated for a rural location	
22. <u>GLOBE &amp; MAIL</u> 140 King St. W.	No data	No data	160 (40'N)	117 (40'N)	40'N - vegetation	Requires further evaluation
...continued/						

TABLE 2. LEAD SURVEYS IN ONTARIO - 1972-1973  
COMPANIES INVESTIGATED AND EXCESSIVE LEVELS OF LEAD FOUND IN SOIL OR VEGETATION IN THEIR  
IMMEDIATE VICINITY

COMPANY AND LOCATION	DEGREE OF CONTAMINATION				EXTENT OF CONTAMINATION IN SOIL OR VEGETATION	R E M A R K S
	S O I L		V E G E T A T I O N			
	ppm, dry weight		ppm, dry weight			
	0-2"	2-4"	not washed	washed		
Considered Excessive	600	500	150	75	30'NE - vegetation	Requires further evaluation
23. <u>IMPERIAL SMELTING</u> 34 Beverley Street Toronto	No data	No data	158 (30'NE)	74 (30'NE)		
24. <u>PARKWAY SALVAGE</u> 400 Eastern Avenue Toronto	No data	No data	126 (90'W)	82 (90'W)	90'W and 35'E in vegetation	Contamination slightly above levels considered excessive is general along Eastern Avenue
25. <u>METALS &amp; ALLOYS</u> 195 Wicksteed Avenue (Leaside) Toronto	2500(75'SE) 630 (100'N)	No data	113 30'W	61 30'W	vegetation - elevated 100'N - soil	Requires further evaluation
26. <u>HAY'S BATTERIES</u> 1300 Barton Street, E. Hamilton	415 (15'W)	185 (15'W)	128 (20'N)	87 (20'N)	20'N in vegetation Soil somewhat elevated	

TABLE 3. LEAD SURVEYS IN ONTARIO - 1972-73  
COMPANIES INVESTIGATED AND NO EXCESSIVE LEVELS  
OF LEAD FOUND IN SOIL OR VEGETATION IN THEIR  
IMMEDIATE VICINITY

SOURCE (Listed Alphabetically)	LOCATION	DATE(S) OF SURVEYS
Acme Steel	743 Warden Scarborough	November, 1973
Auto Elrepco Ltd.	35 Fielding Road Etobicoke	September, 1972
Canada Wire & Cable	147 Laird Drive Leaside	September, 1972
Canadian Pittsburgh Glass	Owen Sound	August, 1972; August, 1973
Cramco Solder	80 Sinnott Road Toronto	July, 1973
Crane Canada	Henry Street, Brantford	November, 1973
Dupont of Canada	Maitland	July, 1973
Handy and Harman	141 John Street Toronto	September, 1972
Ingot Metal	111 Fenmar Drive Downsview	Sept. 1972; Sept. 1973
London Stamp & Stencil	496 Gilbert Ave. Toronto	September, 1972
Long Manufacturing	Oakville	July, 1972; Sept. 1973
Neptune Meters	3526 Lakeshore Blvd.W Etobicoke	November, 1973
Ontario Residues	Toryork Road Weston	August, 1973
Prestolite Co.	Sarnia	October, 1973
Pure Metal Tinning	369 Attwell Road Weston	Sept. 1972, Sept. 1973
R.C.A.	Midland	Aug., 1972; Aug. 1973
Toronto Star	1 Yonge St. Toronto	September, 1972
Toronto Telegram	440 Front St. W. Toronto	September, 1972
United Smelting & Refining	Wellington Street Hamilton	November, 1973

CANADA METAL COMPANY LTD.,  
721 EASTERN AVENUE,  
TORONTO 8, ONTARIO.

The Company manufactures lead and lead alloys for solder and lead oxide from use in batteries and as paint pigments. The lead is derived from the melting of scrap batteries in a blast furnace. The lead oxide is produced by melting lead ingots in a pot furnace and converting the molten lead to oxide in the oxidizing furnaces.

Lead emissions from the blast furnace building and the lead melting and alloying operation resulted in high lead levels in soil and vegetation in the area and are suspected of contributing to elevated blood lead levels of some residents in the area.

Since the initial survey conducted by the Air Management Branch in October of 1971, a Control Order was issued to the Company in September 1973. Under the terms of the Order, the Company has completed installation of approved control equipment, and instituted several changes to plant conditions and procedures.

The Company exhausts all process emission sources through a 152 ft. brick stack, which is also used by ROTO-CAST LTD. The combined estimated emissions from this stack have been calculated to be in compliance with the Regulations.

A violation notice was issued on the basis of an observation made October 15, 1973, that trucks were leaving the process area without having their tires washed. This violation of the Control Order has resulted in summary action and a trial date of June 14, 1974 has been set.

On October 26, 1973, a Stop Order was issued against Canada Metals and against Roto-Cast Ltd. by the Ministry of the Environment, in response to advice from the Medical Officer of Health. This was a result of elevated blood lead levels in the community, indicating a health hazard had resulted from airborne emissions from these operations. This Order was rescinded a few days later by the Supreme Court of Ontario for lack of proof that the Company was in part the cause of the elevation in blood lead levels.

The Ministry is continuing air quality monitoring in the vicinity of the Company (hi-vol and dustfall equipment). Although occasional upsets do occur in the area, readings generally indicate lead concentration values within proposed regulations (10 ug/m<sup>3</sup> for 30 minutes).

RFB/bm  
June 7, 1974.

TORONTO REFINERS AND SMELTERS LIMITED,  
28 BATHURST STREET,  
TORONTO, ONTARIO.

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This Company operates a smelting and refining process to produce lead and lead alloys from spent automobile batteries.

Lead emissions originate from the following sources:

- a) Processing equipment
  - all furnaces and refining and alloying kettles
  - battery top crushing system
- b) The Yard, and Yard Operations
  - outside lead storage piles
  - vehicular traffic within yard area,  
resulting in lead contaminated dust emission

A Stop Order was issued on July 19, 1972, requiring the Company to control emissions from the battery top crushing operations. The Stop Order was lifted on July 6, 1973, after the Air Management Branch was satisfied that the approved equipment was operating in accordance with the regulations.

On October 19, 1972, the Company submitted an abatement programme for approval under section 10 of The Environmental Protection Act, 1971. On January 16, 1973, a Programme Approval was issued which covered emission controls on the lead refining and melting operations. Except for construction of a 175 foot stack, to control sulphuric dioxide emissions, this programme has been completed. Although the Company is willing to construct this stack, the City Building Department has not issued a permit.

In an effort to control yard emissions, the Company have instituted the following housekeeping practices.

- elimination of several lead scrap piles
- covering of finely divided lead storage piles (unbroken battery storage areas uncovered)
- oiling and watering down of working lead piles
- paving of inplant roads
- sweeping daily and oiling all in-plant roads.

To control scrap pile emissions, the Company is proposing to store long term scrap piles within a building. The Toronto Medical Officer of Health, as a requirement of his abatement order under the Public Health Act, has accepted this proposal. The Industrial Abatement Section is also in agreement. However, the MOH will not endorse a building permit until his order has been approved by the Supreme Court. The Company has indicated its willingness to construct such a building immediately.

Erection of the 175 foot stack would effect compliance with The Environmental Protection Act, 1971 and Regulations for sulphur dioxide emissions and a building for scrap pile storage would result in a reduction of lead emissions. However, further air quality monitoring, vegetation and soil sampling must be carried out to determine what further abatement action is necessary.

VS/ng

June 7, 1974

TONOLLI COMPANY OF CANADA LTD.,  
2414 DIXIE ROAD,  
MISSISSAUGA, ONTARIO

This Company recovers aluminum from scrap and fabricated aluminum goods, and lead from scrap lead-acid automotive batteries. The Company has conducted its business on a 17 acre site on the west side of Dixie Road just south of Highway 5 since 1961. Another Company in the vicinity manufactures new lead-acid automotive batteries.

An emission survey under section 83 of The Environmental Protection Act, 1971 was made in February 1972 and as a result, the Company has installed additional pollution control equipment and improved housekeeping practices and made a number of process changes to reduce emissions.

The Company has placed an order with an outside firm to have all bags in the baghouse serving the lead bins replaced by felt bags, at the rate of two compartments per month, commencing in March 1974. At this pace, the entire system will be operating with felt bags by July 1974.

Company intends to install a bag collector on the laboratory sample room furnace hood and a master alloy crucible, to control lead fume emissions. The Company also intends to make an engineering investigation on the feasibility of using the existing 200 ft. stack for the lead line exhaust.

A Phytotoxicology survey made in 1973 indicated an improvement of lead levels in soil and vegetation, as compared to lead concentrations in 1971 and 1972 in the vicinity of Tonolli plant. High volume sampling of suspended lead particulates also show marked reduction of atmospheric lead concentrations in the vicinity of the plant.

Further abatement strategy will be developed when the Company complete their current program and the air quality monitoring data have been assessed.

ESB CANADA LTD.  
2301 DIXIE ROAD,  
MISSISSAUGA, ONTARIO

This Company manufactures lead-acid automotive batteries. There have been no complaints from the public concerning this Company's operations.

An emission survey under section 83 of the Act was made during spring and summer 1972.

Since August 30, 1972, the Company has, as a result of the action taken by the Ministry;

- 1) installed control equipment on the major sources of lead emissions and completed a stack testing program to control emissions from a number of less significant sources.

During a meeting on February 13, 1974, the Company was instructed to install controls on every lead emission point as soon as possible and they are currently finalizing a control program, the completion dates for which has yet to be established.

HS/hy

June 7, 1974



THE PRESTOLITE COMPANY (DIVISION OF ELTRA),  
1352 DUFFERIN STREET,  
TORONTO 4, ONTARIO.

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At this location, the Company manufactures automotive lead-acid batteries. The required lead is purchased in pig form. Lead oxide is made on the premises. The Company is following a voluntary abatement program aimed at full compliance with the Act and Regulation by June 30, 1974.

A preliminary survey of this plant in June, 1969, found the major potential sources of lead dust to have controls and a secondary priority for detailed engineering assessment was assigned to the plant.

To provide a full assessment of the Company's emissions and to evaluate progress on their control program, a detailed engineering survey of the plant was made in May - June, 1973. Based on the findings of this survey, the Company was asked to expedite its efforts and bring all of its emissions into full control by early 1974. The company has co-operated in this regard and recently completed the installation of a second baghouse thus controlling all major sources.

Hi-vol air sampling in the neighbourhood of this plant has indicated significantly elevated lead levels in suspended particulate on days when the wind is blowing from the plant towards the sampling stations. This monitoring will be continued to assist in checking the effectiveness of the recently completed controls.

A program of sampling in the community neighbouring this plant for lead-in-blood was initiated by the Toronto Medical Officer of Health at the request of the Ministry in December, 1973. Preliminary results of this program indicate elevated blood lead levels in some persons to a degree similar to those found near Canada Metals.

Evaluation of the planned stack emission tests and further area monitoring of air quality are necessary in the final assessment of this plant's compliance with the Act and Regulation. It is expected that this will be resolved in early August, 1974.

RFB/bm

June 7, 1974.

ETHYL CORPORATION LTD.,  
CORUNNA, ONTARIO

This Company produces anti-knock additives for gasoline. Two types are produced, tetra-ethyl lead (TEL) and a lesser amount of tetra-methyl lead (TML).

An engineering survey was completed in October 1973 and it was found that the plant was in compliance with the Act and Regulations. The Company conducted a stack sampling program for lead in November 1973 and these tests are currently being repeated by the Ministry of the Environment for confirmation of the results. A soil sampling program indicated elevated lead levels on the company's property but levels equivalent to that found in normal urban environment off the property. Hi-vol sample stations have been set up for the purpose of lead sampling. Further abatement action may be initiated when the final results of the stack testing programme become available

VS/ng  
June 7, 1974

DOMINION COLOUR CORPORATION LIMITED,  
199 NEW TORONTO STREET,  
TORONTO, ONTARIO. M8V 2E9

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This Company manufactures basic colour pigments used in the paint and printing ink industries. A preliminary survey in December 1973, indicated that approximately 10 percent of the pigments produced contain lead. Calculations based on production data etc., indicate that lead emissions are in violation of The Environmental Protection Act, 1971.

The Company has agreed to carry out emission testing, and this is currently underway.

The Company has installed dust collection equipment on the grinding and mixing operations, and the efficiency of these units is currently under evaluation.

Further abatement action may be necessary when the results of the stack testing program are completed.

Air quality monitoring is being carried out in the vicinity of the plant and so far, reports received do not indicate excessive lead levels.

RDH/bm

June 7, 1974.

CORNING GLASS COMPANY,  
HIGHWAY 532,  
BRACEBRIDGE, ONTARIO

The Company operates a glass furnace and produces leaded glass from which it manufactures television picture tubes.

Operations have produced excessive levels of lead and fluorides which are currently being monitored by Phytotoxicology and Air Quality Sections. The Company personnel also conducted stack emission tests.

The Company has installed a fluoride control scrubber resulting in reduced fluoride emissions.

Application for Approval of furnace modifications has been received. These modifications are expected to reduce lead emissions.

A Program Control Approval is currently being prepared which will lead to furnace emissions being brought into compliance with the Regulations.

AW/ng  
June 7, 1974

CHRYSLER CANADA LIMITED  
ASSEMBLY PLANT  
WINDSOR, ONTARIO

This plant is a large automotive assembly and engine manufacturing complex located in the east of Windsor.

An engineering evaluation was completed in 1973 and discussed with the Company. The Company subsequently engaged consultants to conduct a stack sampling program to evaluate lead emissions and the final report is currently under evaluation by the Ministry.

Soil sampling has been carried out in the general area and monitoring equipment has been set up to determine airborne concentration.

Initial soil sampling results appear to be consistent with the expected value under existing land usage and a hi-vol sampler was installed on May 9, 1974 to assess air quality in the area. Further abatement action will be initiated on the basis of the findings of the stack testing and air quality monitoring program.

June 7, 1974

VS/hy

GOODYEAR TIRE AND RUBBER COMPANY LIMITED,  
HOSE PLANT,  
MOUNTAIN ROAD,  
COLLINGWOOD, ONTARIO \_\_\_\_\_

At this location, the Company manufactures rubber hoses for use by the automotive industry.

A molten lead pot is used to coat the assembled hose prior to the curing process. After curing, the lead is stripped and returned to the lead pot.

A preliminary survey of the plant conducted in January 1972, indicated that there was a potential problem from lead emissions

A Phytotoxicology survey conducted in 1973 indicated excessive lead levels in the vicinity of the plant.

An air quality monitoring program and emission survey is presently underway to determine if abatement action is required.

AVG/ng  
June 7, 1974

SIGNODE CANADA LIMITED,  
115 RIDGETOP ROAD,  
SCARBOROUGH, ONTARIO.

This Company manufactures steel strapping for fastening and crating type applications.

Molten lead baths are used to clean and heat treat the strapping **prior** to the application of protective coatings.

An engineering survey of the plant was made in November 1973. Soil samples were taken in the area of the plant and revealed slightly elevated lead values and stack emission tests were requested of the Company.

Stack tests completed in February 1974 have been evaluated by the Special Studies Group.

Preliminary calculations indicate the Company is in compliance with **present** standards for lead, but some controls may be necessary should the proposed new standards be enacted.

Further abatement action will await the report of the special committee on lead, probably at the end of June.

RFB/hy

June 7, 1974

TRUE TEMPER,  
HAMILTON, ONTARIO.

The Company uses molten lead for tempering tools. The emissions are treated in a cyclone. The plant is not considered to produce an air pollution problem. It is expected that the use of lead will be discontinued through conversions to a new process.

CJH/bm

June 7, 1974.



FEDERATED-GENCO LIMITED,  
1110 BIRCHMOUNT ROAD,  
SCARBOROUGH, ONTARIO

At this plant, the Company manufactures lead, tin, zinc and cadmium alloys from scrap metals. Certain other scrap metals, notably copper wire, are purchased, sorted and baled for resale.

Engineering surveys were conducted in 1969 and again in 1973 to assess the lead emissions emanating from the plant. It was found that the plant was in compliance with the Act and Regulations. To confirm our assessments, the Company conducted a stack testing program in March 1974 under the scrutiny of the Industrial Abatement Section and the results are expected shortly.

Vegetation surveys were carried out in September 1972 and August 1973 which indicated the Company to be a source of heavy metal contamination.

The Ministry has recommended to the Medical Officer of Health that blood lead testing be conducted in the neighbourhood of this plant to determine the possible effects of lead accumulations in the area over the past several years.

The Industrial Abatement Section is awaiting the results of the stack testing program to determine if further abatement action is necessary.

RFB/ng

June 7, 1974

MUELLER  
CLIFFORD STREET,  
SARNIA, ONTARIO

The Company manufactures brass, water and gas distribution fittings. To this end, the Company operates electric furnaces which melt approximately 8 million/lbs. of brass per year (7% lead).

On October 31, 1973, the Phytotoxicology Section conducted tests which indicated high lead readings in the soil although lead in the brass was low. These results suggest that lead in soil is not being influenced by current emissions of the Mueller plant.

CIR/ng  
June 7, 1974

GOULD MANUFACTURING,  
FORT EPIE, ONTARIO.

This Company makes lead acid storage batteries.

Recent sampling of soil and vegetation in the neighbourhood of the plant shows that the concentrations are approximately comparable with urban levels. Further checks will be made later this year.

Air sampling was conducted over a period of a few months in 1972-73. On rare occasions, the concentrations were marginally above proposed new standards of 5 micrograms per cubic meter of air. Steps have now been taken to avoid exceeding the proposed new standard.

CJM/bm

June 7, 1974.

E.S.B. CANADA LIMITED, INDUSTRIAL DIVISION,  
663 MARDEN AVENUE,  
SCARBOROUGH, ONTARIO.

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The Company manufactures lead-acid storage batteries at this location for industrial, commercial and institutional use. The required lead and lead oxide are prepared in the Company's plant in Mississauga or purchased from others.

A preliminary survey of this plant was conducted in April, 1970. Major emission sources were found to have control and the plant was given a secondary priority for a detailed engineering survey.

A vegetation lead survey conducted in September, 1972 revealed slightly elevated lead levels in the area of this plant. A second vegetation survey was conducted in August, 1973 with similar results.

An engineering survey was initiated in October, 1972 and a report with recommendations submitted to the Company on March 15, 1973. Total lead emissions were estimated to exceed the Regulation, largely due to the periodic failure of control equipment used on the paste mixers. The Company agreed on a voluntary program basis to replace this equipment and to conduct a series of tests to confirm the need for further controls on certain secondary emission points identified in the survey.

Stack tests were completed on the exhausts to the two plate pasting machines. Significant lead dust emissions were indicated and the Company planned to duct these sources into the proposed new baghouse.

A hi-vol air sampling station was established and operating opposite this plant on Marden Avenue in August, 1973. To date, lead levels in suspended dust collected at this sampling station have met current ambient air quality criteria.

As an outcome of recent experience with lead effects in the area of the Canada Metals Plant, the Company was asked by the Ministry on November 6, 1973, to submit without delay an accelerated control program with a firm commitment to completion dates. In response, they expanded their control program and ordered an additional 20,000 cfm baghouse without waiting for justification by stack testing.

At this date, both baghouses are in place and fully operative. Stack emission testing is scheduled for July, 1974, to confirm the effectiveness of these controls.

RFB/bm  
June 7, 1974.

NORTH AMERICAN CONTAINERS,  
AYLMER, ONTARIO

The Company manufactures metal containers which involves soldering joints. The operation is not considered to result in any off property problems at this time.

A soldering dross reclamation process did result in excessive emissions several years ago. To correct this problem, the Company installed an approved fabric filter approximately three years ago.

Soil analysis in December 1973, indicated elevated lead levels in soil up to approximately 100 yards from the plant. Further soil and vegetation testing will be conducted in 1974 to determine whether or not lead in the soil is a result of emissions which occurred prior to installation of the filter.

JTM/hy

June 7, 1974

GLOBELITE BATTERIES CANADA LIMITED,  
1290 BELLAMY ROAD N.,  
SCARBOROUGH, ONTARIO

Automobile and industrial lead-acid storage batteries are manufactured in this plant. The required pig lead and lead oxide for these batteries are purchased from Canada Metals Limited and other companies.

An engineering survey was conducted in October, 1972 and aggregate lead dust emissions from the automotive battery-making operations were estimated to be in violation of the Regulation. The Company agreed to install control equipment to control these emissions.

At this time, installation of one baghouse and the Handte scrubber have been completed bringing the major emission point under control. Stack emission tests on the new baghouse conducted in October, 1973, indicated compliance with the Regulations on the source. Installation of a second baghouse is underway and completion expected by June 12, 1974.

Further stack emission tests are planned for June 1974, to ensure overall compliance with the Act and Regulations.

RFB/ng  
June 7, 1974

RAM REFINED ALLOYS  
HAMILTON, ONTARIO

This small operation is considered to be satisfactory as long as clean lead is used and the melt pots are covered. However, a close surveillance of the operations is being maintained to ensure compliance with the Act and regulations.

The plant is remote from residences; the nearest resident is approximately 750' away.

CJH/hy

June 7, 1974

GENERAL MOTORS (CANADA) LTD.,  
NORTH PLANT,  
OSHAWA, ONTARIO.

General Motors operates a manufacturing plant in Oshawa North for the production of batteries, radiators, mufflers and other miscellaneous parts for automobiles and trucks.

The problem areas have been odours from the radiator production area and dust and fumes from the battery manufacturing area.

An approved scrubber has been installed to control odours from the radiator shop.

The Company conducted stack testing for lead emissions at the North Plant and investigated a program concerning assembly plant problems.

The results of the 1972 soil and vegetation survey in the vicinity of the North Plant indicate little change in lead levels from 1971. These levels were relatively low, but not considered completely acceptable.

Resulting from discussions with the Company, lead emission sources in the Battery Plant were re-tested by the Ontario Research Foundation and preliminary evaluation indicates that the Company is in compliance with the Act and Regulations.

The levels of suspended lead particulate, for January, February and March 1974, measured by a high volume sampler in the vicinity of the North Plant, are less than 20% of the maximum permissible levels.

GBN/bm  
June 7, 1974.



DON MILLS STEEL AND METAL CO.,  
DON MILLS ROAD,  
GORMLEY, ONTARIO.

The Company operates a scrap yard and receives old car batteries for salvage.

Batteries were crushed at this location, to separate the lead plates from the castings. This was a source of lead dust, as well as a possible source of ground water contamination from the spent acid solution in the batteries.

In August 1973, soil samples were taken which showed relatively high lead and sulphate levels.

After discussions with Ministry personnel, the owner ceased crushing batteries as of September 14, 1973, and has confirmed this by letter to the Ministry.

GBN/bm

June 7, 1974.

GLOBE & MAIL,  
140 KING STREET WEST,  
TORONTO, ONTARIO

Vegetation sampling in the vicinity of the above Company has indicated lead levels only marginally in excess of those that might be found in a normal urban environment.

As this operation has been moved to a new location, it is expected that the lead levels will decrease in this growing season and surveillance will be carried out to verify this.

VS/ng  
June 7, 1974

IMPERIAL SMELTING AND REFINING LIMITED,  
34 BEVERLEY STREET,  
TORONTO, ONTARIO

This Company incinerates waste materials from metalsmith shops to reclaim gold and silver. It also purchases gold and silver for alloying and refining.

Emissions from this plant are in compliance with  
The Environmental Protection Act, 1971.

A proposed plant expansion would emit no process contaminant to atmosphere.

VS/ng  
June 7, 1974

PARKWAY SALVAGE COMPANY  
TORONTO, ONTARIO

This Company reclaims lead scrap from used batteries.

In January, 1973, a survey of this plant identified the battery crushing and reclaimed lead storage operations as sources of lead emissions.

The company proceeded with an abatement program resulting in the Company's discontinuing of lead reclaiming operations in August, 1973.

In October, 1973, a vegetation survey indicated excessive lead levels in the area. Lead contamination is general along Eastern Avenue due to past activities and the close proximity to other major lead sources, Canada Metals and the Gardiner Expressway.

This Company is considered to be in compliance with the Act and Regulations.

AVG/hy

June 7, 1974

METALS & ALLOYS LIMITED,  
205 WICKSTEAD AVENUE,  
TORONTO 352, ONTARIO.

The Company recovers aluminum and non-ferrous metals and alloys from scrap.

A survey made in November, 1968 instigated improvements which were subsequently made in existing emission controls on the bronze making and aluminum turnings drying operations.

In late 1970, the Company installed one full-scale, experimental coated-fabric filter system in an attempt to control emissions from the aluminum melt furnaces.

Following successful testing, the Company extended the system to provide emission control for its six other aluminum furnaces. This control system is now in full use without operational problems.

RFB/bm

June 7, 1974.

HAY'S BATTERIES,  
HAMILTON, ONTARIO.

This plant has been shut down. A new operation will be starting at Dunbar Street within a few weeks time. A Certificate of Approval has been issued for the new plant. This will ensure that the plant is in compliance with the law.

CJM/bm

June 7, 1974.

